



## SPECIFICATION FOR APPROVAL

CUSTOMER : \_\_\_\_\_

PRODUCT NAME : 25W High-power PoE Module

PRODUCT MODEL : V193

BRAND : TST (OEM/ODM)

DATE : 2025 / 04 / 02

DRAWING			CUSTOMER APPROVE
DESIGNED	CHECKED	APPROVED	
Yannick	Youtrong	Mark	
DATE	2025 / 04 / 02		Please return the visa after confirmation, thank you!

Shenzhen Tstone Technology Co.,Ltd

Mobile: 13640991523

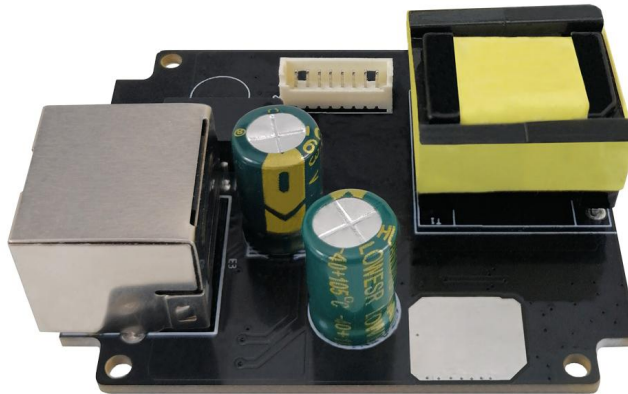
http: [www.tstpoe.com](http://www.tstpoe.com)

Add: Room 903, Building B-14C, First Industrial Zone, Baihua Community, Guangming Street, Guangming District, Shenzhen, China



PRODUCT: 25W High-power PoE module

MODEL: V193



## What Is PoE

POE (Power Over Ethernet) refers to the technology that can transmit data signals for some IP-based terminals (such as IP phones, wireless LAN access point APs, IP cameras, etc.) without any changes to the existing Ethernet Cat.5 cabling infrastructure, and can also provide DC power supply for such devices.

A complete POE system consists of two parts: Power Sourcing Equipment (PSE) and Powered Device (PD). The PSE device is the device that powers the Ethernet client device and is also the manager of the entire POE (Power-over-Ethernet) process. The PD device is the PSE load that receives the power supply, that is, the client device of the POE system. Based on the IEEE 802.3af/at standard, the two establish information about the connection status, device type, power consumption level and other aspects of the PD of the power receiving device, and use this as the basis for PSE to supply power to the PD through Ethernet.



## The Principle of POE

The standard Category 5 cable has four twisted pairs, but only two pairs are used in 10M BASE-T and 100M BASE-T. IEEE802.3af/at allows two uses: (1) When the idle pin is used for power supply, pins 4 and 5 are connected as the positive pole, and pins 7 and 8 are connected as the negative pole. (2) Pin 1 and pin 2 are connected as the positive pole, and pin 3 and 6 are connected as the negative pole.

## The Advantages of POE

1. Save labor and material costs. Compared with the traditional wiring method of weak current engineering, POE only needs to install a network cable to make the IP equipment work normally. In many cases, POE is more advantageous in the places where it is difficult to deploy AC power. As the number of network devices in the system increases, the use of POE eliminates the need for local power supply for the equipment, which will greatly reduce deployment costs and simplify their manageability.
2. Easy to install and manage. Customers can autonomously and securely mix PoE devices and legacy devices within the system, and can coexist with existing Ethernet cables. PoE devices are compatible with the management system of existing network devices and can share the management platform with existing network devices.
3. Good security. The Power Sourcing Equipment (PSE) in a PoE system will only supply power to the Powered Device (PD) that needs to be powered. Only when the Device that needs to be powered is connected and the protocol is successfully identified, the power supply equipment will have a voltage output and supply power to the powered device, thus eliminating the risk of leakage and short circuit on the line.



## Product Introduction

V193 is a high-power active PoE module with a conversion efficiency of over 85%. Its power supply mode is fully compatible with RJ12+ RJ36- / RJ45+ RJ78-.

The V193 module is responsible for connecting to PSE. It processes POE signals, safely powers the devices, and transmits network signals.

## Product Description

Input port: Horizontal RJ45 female socket \* 1. Input voltage: DC wide voltage ranging from 38 to 56V. Output port: Vertical 8Pin PH1.25 female socket \* 1. Output voltage: DC24V. Output current: max1A.

Structure size: 53\*45\*14.7mm. Screw holes:  $\varnothing=2.0\text{mm}$ \*4. PCB: four-layer board, H=1.6mm. Surface painting: bright black. Overall layout: square structure, the maximum thickness is 14.7mm. The module is double-side-designed. For a high space utilization rate, the high and low components are arranged on two sides.

The V193 complies with the IEEE802.3af/at POE standard protocol. Its maximum output power is 25W(IEEE802.3at class4), and it can also output 15.4W (IEEE802.3af class 3). It supports wide-voltage input of DC38-56V, and the default output voltage is DC24V. Other voltages can be customized. The effective transmission distance is 100 meters, and it supports 24/7 non-stop operation.

The V193 adopts a high-temperature-resistant and flame-retardant interface. The circuit design is equipped with protection functions such as lightning protection, short-circuit protection, overload protection, and high-temperature protection. Its EMC parameters comply with the IEC 61000-4-2/3/4/5/6 standards. It uses an isolated design scheme and is equipped with a high-power pure copper isolation transformer. The product has obtained certifications such as CE, FC, and RoHS, and is well-received by consumers.



## Product Features

- IEEE802.3af/at POE standard protocol and handshake recognition function
- Input: wide POE voltage DC38-56V
- Output: DC12V max1.3A(other voltages can be customized)
- 10M/100M adaptive transmission rate
- RJ12+ RJ36- / RJ45+ RJ78- Fully compatible
- Ultra-thin design, easy installation
- 4KV surge suppression
- Overheat protection, overvoltage protection, overload protection, short circuit protection
- The conversion efficiency exceeds 85%
- EMC parameters comply with IEC 61000-4-2/3/4/5/6 standards
- Large brand high-precision electronic components with high parameter accuracy and low error rate
- High power, high conductivity, low impedance transistor with stable performance and low heat generation
- Large brand capacitors feature high frequency, low resistance, strong energy storage capabilities and low energy losses
- Large brand original IC with stable performance
- High temperature resistant and environmentally friendly PCB material
- Adopt pure copper pin connectors to avoid bad contact
- Pure copper transformer features a long service life and strong anti-interference ability
- High-temperature-resistant and flame-retardant interface



## Specifications

Items	Specifications
Product Name	25W High-power PoE module
Product Model	V193
PoE Standard	IEEE802.3af/IEEE802.3at
Input	POE: DC38-56V
Output	DC24V max1A
Conversion Efficiency	≥85%
PoE Pin	RJ12+ RJ36- / RJ45+ RJ78- Fully compatible
Conversion Mode	Isolated
Data Rate	10M/100M Adaptive
Transmission Distance	100 meters
Surge Protection	4KV
Circuit Protection	Overload Protection Overheating Protection Overvoltage Protection Short circuit Protection
LED Indicator	/
Interface	POE Input Port: Horizontal RJ45 female socket * 1 Output Port: Vertical 8-Pin PH1.25 female socket * 1
Function	/
Material	FR-4
Color	Bright black
Accessories	/
EMC	IEC 61000-4-2/3/4/5/6
Temperature	-20~80℃ For Operating -30~80℃ For Storage
Humidity	RH95% MAX (Non-condensation)
Weight	N. W: 27g
Dimension	53mm*45mm*14.7mm
Package	Anti-static pearl cotton

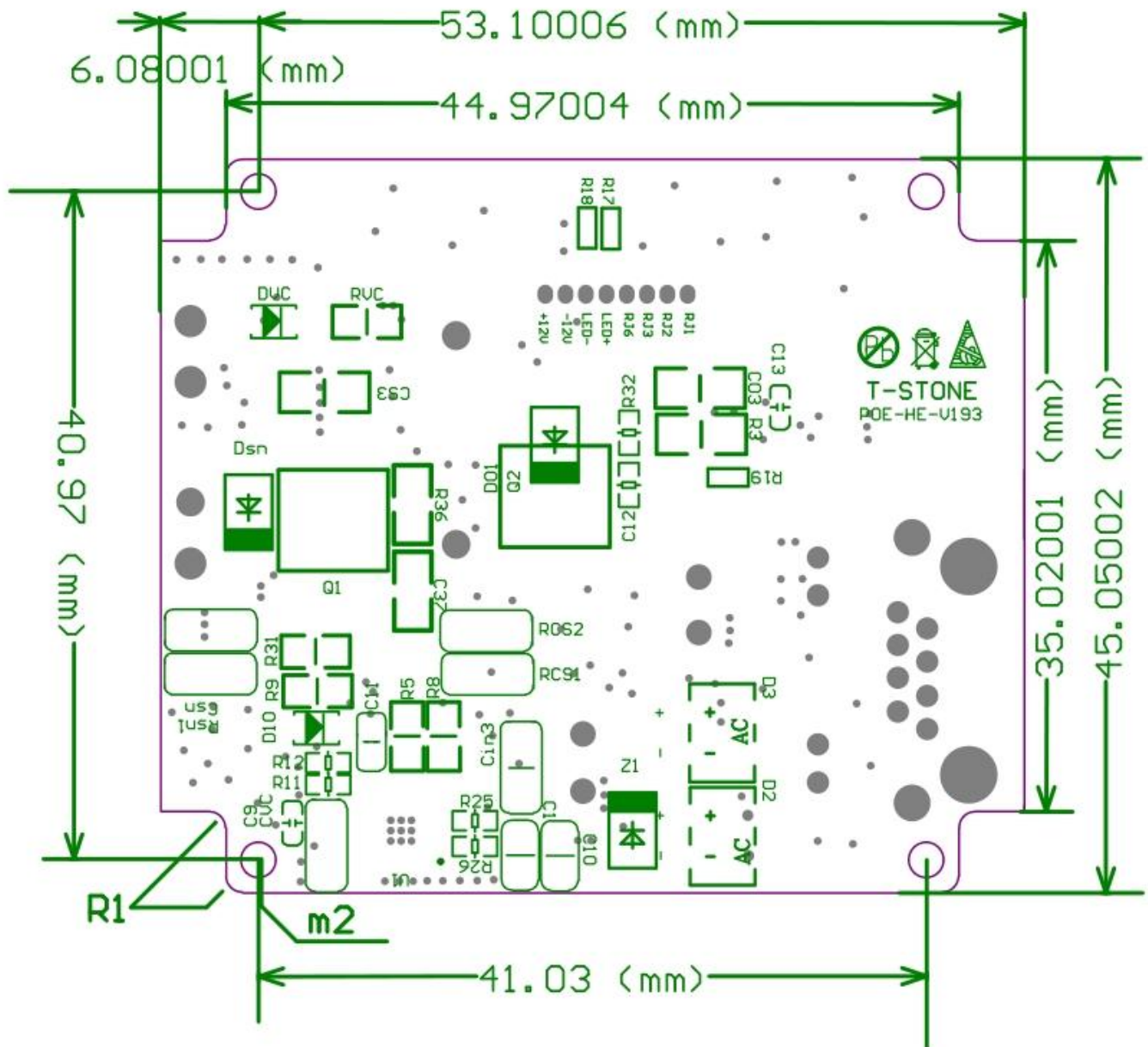


## Product Applications

V193 is mainly applied in industry products such as broadcasting audio systems, commercial display billboards, wireless APs, etc.

The application of the V193 has greatly enhanced the safety of power supply. The electric current near the equipment is all low-voltage electricity, eliminating the potential hazards of electric shock and fire. It has significantly reduced the difficulty of centralized power supply. Only the switch needs to be centrally powered, and the power supply range is concentrated, making it easy to manage and with low costs. The V193 has performed well in the fields of broadcasting, commercial displays and Wireless APs, winning the favor of manufacturers and end-users.

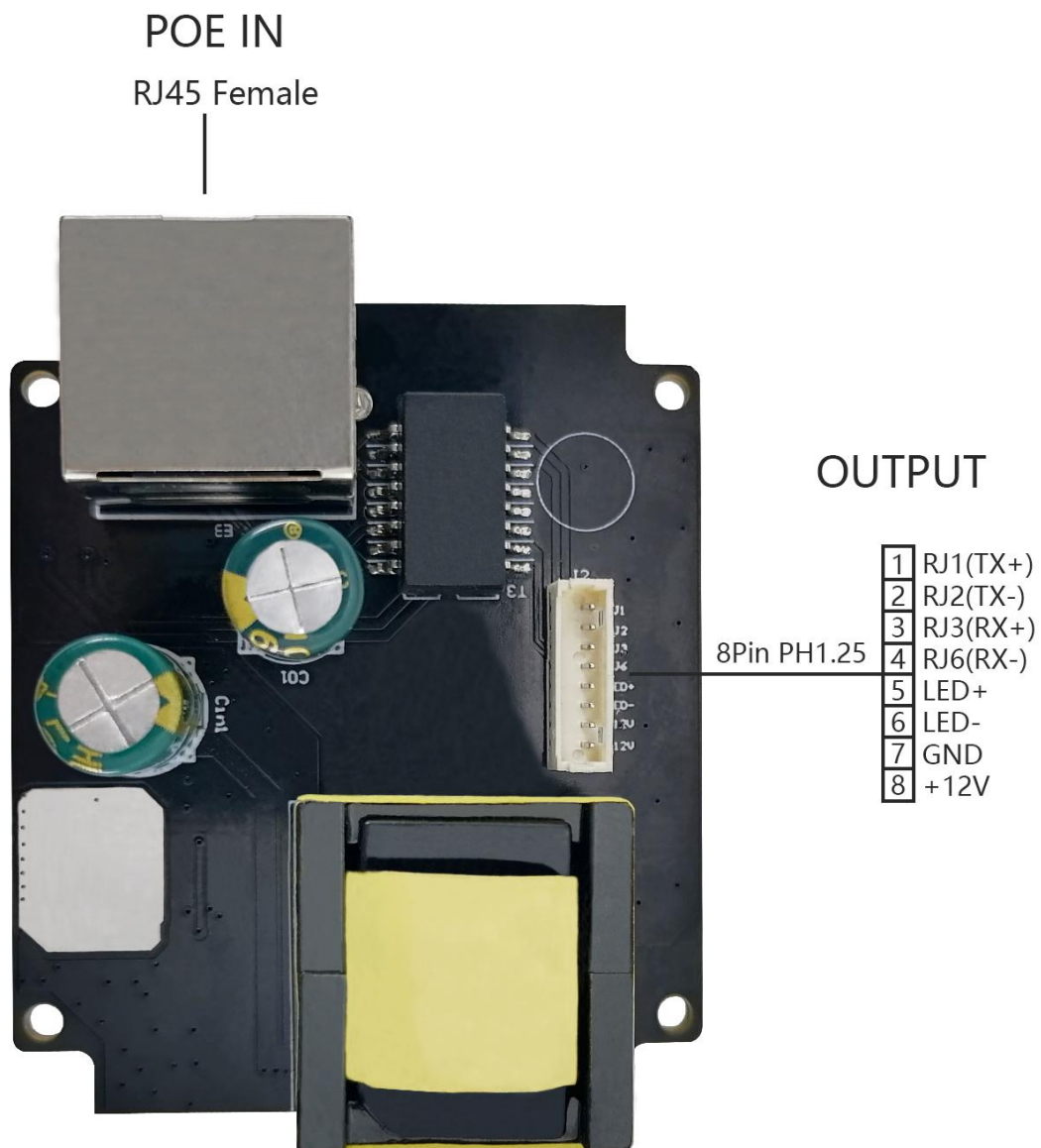
## Dimensions







## Interface Definition





## Application Scenarios



Commercial Display Billboards



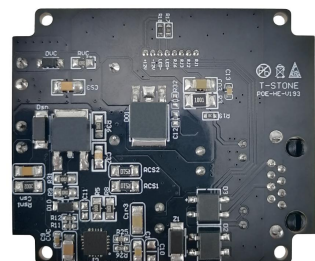
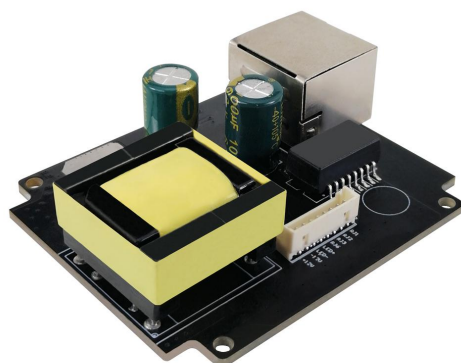
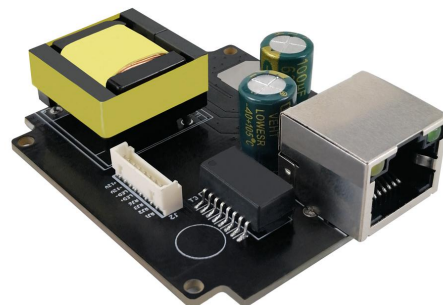
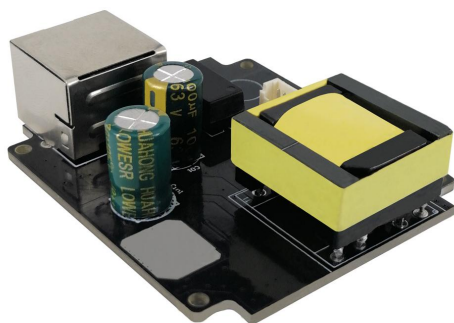
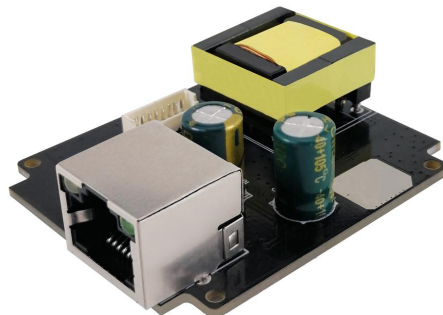
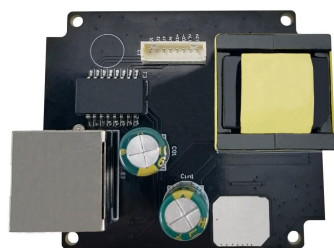
Wireless AP



Broadcast Audio System



## Product Detail





## Product Package



Package Size: 41\*29\*32 cm ( L\*W\*H )

MPQ: 280PCS

N.W: 7.6kg

G.W: 8.6kg